

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

1. (Currently Amended) A reamer for reaming a bone or a cartilage, or a combination thereof, during surgery, wherein the reamer includes a hollow body of a ~~generally dome shape~~, comprising an interior and a ~~generally dome-shaped exterior surface~~, the exterior surface of the hollow body comprising a first portion and at least one second portion,

~~the generally dome-shaped exterior of the hollow body comprising a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into the interior of the hollow body, the generally dome-shaped exterior of the hollow body having a first portion and at least one second portion;~~

the first portion of the exterior surface of the hollow body dimensioned substantially as a surface of rotation about a rotational axis, and comprising a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into an interior of the hollow body, and

the at least one second portion forming at least one generally planar exterior surface ~~[[side]]~~ of the hollow body, ~~not forming a surface of rotation about the rotational axis, being~~

~~located generally more closely to the rotational axis than the first portion, and reducing a dimension of the exterior of the hollow body in at least one dimension transverse to the rotational axis; the at least one second portion being free of any raised edges for cutting the bone or the cartilage or the combination thereof and free of openings for passing of fragments of the bone or cartilage or the combination thereof into the interior of the hollow body.~~

wherein the first portion of the exterior surface of the hollow body includes a peripheral edge that forms at least a portion of a first arc, and wherein an intersection of the first portion and the at least one second portion forms a second arc that extends continuously from one point on the peripheral edge of the first portion to another point on the peripheral edge of the first portion.

2. (Cancelled)

3. (Currently Amended) The reamer of Claim 1, wherein the at least one second portion is oriented in a plane substantially parallel to the rotational axis.

4. (Original) The reamer of Claim 2, including two second portions.

5. (Original) The reamer of Claim 4, wherein the two second portions are located in planes substantially parallel to one another.

6. (Cancelled)

7. (Cancelled)

8. (Original) The reamer of Claim 1, wherein the surgery is a hip replacement arthroplasty and the bone and the cartilage are the acetabulum of an animal or a human.

9. (Currently Amended) A reamer for reaming a bone or a cartilage, or a combination thereof, during surgery, wherein the reamer includes a hollow body of a general dome shape[[,]] comprising ~~an interior and~~ a generally dome-shaped exterior surface, the generally dome-shaped exterior surface of the hollow body [[having]] comprising a first portion and at least one second portion,

wherein the first portion of the generally dome-shaped exterior surface of the hollow body comprises a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into [[the]] an interior of the hollow body,

wherein the raised edges are confined to an area of the first portion in a band straddling a middle portion of the ~~occupying substantially less than half of an area of the~~ generally dome-shaped exterior surface of the hollow body, and

wherein the at least one second portion forms a portion of the dome-shaped exterior surface that ~~at least one side of the hollow body and~~ has no cutting raised edges or openings.

10. (Currently Amended) The reamer of Claim 9, wherein the first portion of the generally dome-shaped exterior surface of the hollow body occupies substantially less than half of the hollow body exterior surface. ~~raised edges are confined to a band straddling a middle portion of the exterior of the hollow body.~~

11. (Cancelled)

12. (Currently Amended) The reamer of Claim 9 [[10]], wherein the surgery is a hip replacement arthroplasty and the bone and the cartilage are in the acetabulum of an animal or a human.

13 – 24. (Cancelled)

25. (Currently Amended) A reamer for reaming a bone or a cartilage, or a combination thereof, during surgery, comprising a hollow dome comprising an exterior surface, the exterior surface of the hollow dome comprising a first portion and at least one second portion,

~~the dome comprising, on an exterior of the dome, a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into an interior of the dome,~~

the dome ~~having a~~ first portion of the exterior surface of the hollow dome dimensioned substantially as a surface of rotation about a rotational axis and comprising a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into an interior of the hollow dome,

the at least one second portion forming at least one generally planar exterior surface of the hollow dome, the at least one second portion being free of any raised edges for cutting the bone or the cartilage or the combination thereof,

wherein the first portion of the exterior surface of the hollow dome includes a peripheral edge that forms at least a portion of a first arc, and wherein an intersection of the first portion and the at least one second portion forms a second arc that extends continuously from one point on the peripheral edge of the first portion to another point on the peripheral edge of the first portion.

~~and at least one side not forming a surface of rotation about the rotational axis, located generally more closely to the rotational axis than the portion dimensioned substantially as a surface of rotation, and reducing a dimension of the exterior of the dome in at least one dimension transverse to the rotational axis.~~

26. (Currently Amended) The reamer of Claim 25, wherein the at least one second portion is sides of the dome are substantially enclosed.

27. (Currently Amended) A reamer for reaming a bone or a cartilage, or a combination thereof, during surgery, comprising a generally dome-shaped hollow body, the body comprising an exterior surface comprising a first portion and at least one second portion,

~~the generally dome-shaped hollow body comprising, on an exterior of the dome, a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into an interior of the generally dome-shaped hollow body;~~

the first portion of the generally dome-shaped hollow body ~~having a portion dimensioned substantially as a surface of rotation about a rotational axis, and at least one side not forming a surface of rotation about the rotational axis and located generally more closely to the rotational axis than the portion dimensioned substantially as a surface of rotation, and comprising a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into an interior of the generally dome-shaped hollow body,~~

the at least one second portion forming at least one generally planar exterior surface of the generally dome-shaped hollow body, the at least one second portion being free of any raised edges for cutting the bone or the cartilage or the combination thereof,

wherein the first portion of the exterior surface of the generally dome-shaped hollow body includes a peripheral edge that forms at least a portion of a first arc, and wherein an intersection of the first portion and the at least one second portion forms a second arc that extends continuously from one point on the peripheral edge of the first portion to another point on the peripheral edge of the first portion.

~~the generally dome-shaped hollow body having a smaller exterior diameter in a direction of the at least one side not forming a surface of rotation as compared to an exterior diameter of the surface of rotation.~~

28. (Currently Amended) The reamer of Claim 27, wherein ~~sides of the~~ at least one second portion of the generally dome-shaped hollow body ~~[[are]]~~ is substantially enclosed.

29. (Currently Amended) A reamer for reaming a bone or a cartilage, or a combination thereof, during surgery, wherein the reamer comprises a hollow dome comprising an exterior surface, the exterior surface comprising a first portion and at least one second portion,

wherein the first portion of the exterior surface of the hollow dome comprises a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into an interior of the hollow dome,

wherein the raised edges are confined to an area of the first portion in a band straddling a middle portion of the exterior surface of the hollow dome, and

wherein the at least one second portion forms a portion of the exterior surface of the hollow dome that has no raised edges or openings.

~~the dome having~~

~~an area comprising, on an exterior of the dome, a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into an interior of the dome, the area occupying substantially less than half of the exterior of the dome, and~~
~~at least one side that has no cutting edges.~~

30. (Currently Amended) The reamer of Claim 29, wherein the least one second portion sides of the dome are is substantially enclosed.

31. (Currently Amended) The reamer of Claim 29, wherein the first portion of the exterior surface of the hollow dome occupies substantially less than half of the hollow dome exterior surface. ~~the raised edges are confined to a band straddling a middle portion of the dome.~~

32. (Currently Amended) A reamer for reaming a bone or a cartilage, or a combination thereof, during surgery, wherein the reamer comprises a generally dome-shaped hollow body, the hollow body comprising an exterior surface comprising a first portion and at least one second portion,
~~the generally dome-shaped hollow body having~~

wherein the first portion of the exterior surface of the generally dome-shaped hollow body comprises ~~an area comprising, on an exterior of the generally dome-shaped hollow body,~~ a plurality of raised edges for cutting the bone or the cartilage or the combination

thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into an interior of the generally dome-shaped hollow body, wherein the raised edges are confined to an area of the first portion in a band straddling a middle portion of the exterior surface of the generally dome-shaped hollow body ~~the area-occupying substantially less than half of an exterior area of the generally dome-shaped hollow body, and~~

wherein the at least one second portion forms a portion of the exterior surface of the generally dome-shaped hollow body and has no raised edges or openings. ~~at least one side that has no cutting edges.~~

33. (Currently Amended) The reamer of Claim 32, wherein the at least one second portion of the exterior surface of the generally dome-shaped hollow body is sides of ~~the generally dome-shaped hollow body are~~ substantially enclosed.

34. (Currently Amended) The reamer of Claim 32, wherein the first portion of the exterior surface of the generally dome-shaped hollow body occupies substantially less than half of the exterior surface of the generally dome-shaped body. ~~the raised edges are confined to a band straddling a middle portion of the generally dome-shaped hollow body.~~

35. (Currently Amended) A reamer for reaming a bone or a cartilage, or a combination thereof, during surgery, wherein the reamer includes a hollow body, the hollow body of a generally dome shape, comprising an interior and a generally dome-shaped exterior surface comprising a first portion and at least one second portion,

~~the generally dome-shaped exterior of the hollow body comprising a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into the interior of the hollow body, the generally dome-shaped exterior of the hollow body having a first portion and at least one second portion;~~

the first portion of the exterior surface of the hollow body dimensioned substantially as a surface of rotation about a rotational axis, and comprising a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into the interior of the hollow body.

the at least one second portion forming at least one generally planar exterior surface ~~[[side]] of the hollow body, not forming a surface of rotation about the rotational axis, being located generally more closely to the rotational axis than the first portion, and reducing a dimension of the exterior of the hollow body in at least one dimension transverse to the rotational axis; the at least one second portion being free of any raised edges for cutting the bone or the cartilage or the combination thereof,~~

wherein the first portion of the exterior surface of the hollow body includes a peripheral edge that forms at least a portion of a first arc, and wherein an intersection of the first portion and the at least one second portion forms a second arc that extends continuously from one point on the peripheral edge of the first portion to another point on the peripheral edge of the first portion, and where

~~wherein sides of the~~ at least one second portion of the exterior surface of the hollow body ~~[[are]]~~ is substantially enclosed.

36. (Currently Amended) A reamer for reaming a bone or a cartilage, or a combination thereof, during surgery, wherein the reamer includes a hollow body of a general dome shape, the hollow body comprising an interior and a generally dome-shaped exterior surface, the generally dome-shaped exterior surface of the hollow body ~~[[having]]~~ comprising a first portion and at least one second portion,

wherein the first portion of the generally dome-shaped exterior surface of the hollow body comprises a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or the combination thereof into the interior of the hollow body,

wherein the raised edges are confined to an area of the first portion in a band straddling a middle portion of ~~occupying substantially less than half of an area of~~ the generally dome-shaped exterior of the hollow body, and

wherein the at least one second portion forms a portion of the dome-shaped exterior surface that at least one side of the hollow body and has no cutting edges or openings, and wherein the at least one second portion is substantially enclosed. -and

~~wherein sides of the hollow body are substantially enclosed.~~

37. (New) A reamer for reaming a bone or a cartilage or a combination thereof, during surgery, wherein the reamer includes a cup-shaped hollow body generally formed as a

section of a dome portion or as a truncated dome portion, the hollow body comprising a dome-shaped exterior surface and an open end and a substantially closed end to define an interior volume that is spatially bounded by:

(a) a first portion of the dome-shaped exterior surface comprising a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or combination thereof into the interior volume of the hollow body, and

(b) at least one second portion of the dome-shaped exterior surface that intersects with the first portion, wherein the at least one second portion has no raised edges or openings, and

wherein, in use, the at least one second portion generally serves to maintain the fragments of bone or cartilage or the combination thereof within the interior volume of the hollow body, and

wherein the first portion of the dome-shaped exterior surface includes a peripheral edge that forms at least a portion of a first arc, and wherein an intersection of the first portion and the at least one second portion forms a second arc that extends from one point on the peripheral edge of the first portion to another point on the peripheral edge of the first portion.

38. (New) The reamer of Claim 37, wherein the dome-shaped exterior surface is a spheroidal, ellipsoidal, or spherical exterior surface.

39. (New) A reamer for reaming a bone or a cartilage or a combination thereof, during surgery, wherein the reamer includes a cup-shaped hollow body generally formed as a section of a dome portion or as a truncated dome portion, the hollow body comprising an exterior surface and an open end and a substantially closed end to define an interior volume that is spatially bounded by:

(a) a first portion on the exterior surface dimensioned substantially as a surface of rotation about a rotational axis comprising a plurality of raised edges for cutting the bone or the cartilage or the combination thereof, and a plurality of openings for passing of fragments of the bone or the cartilage or combination thereof into the interior volume of the hollow body, and

(b) at least one second portion on the exterior surface that intersects with the first portion,

wherein, in use, the at least one second portion is configured to maintain the fragments of bone or cartilage or the combination thereof within the interior volume of the hollow body, and

wherein the raised edges are confined to an area of the first portion in a band straddling a middle portion of the exterior surface of the cup-shaped hollow body.

40. (New) The reamer of Claim 39, wherein the exterior surface is a spheroidal, spherical, or ellipsoidal surface.